

REMARKS

Claims 1-18 are pending in the present application. Claims 1-8 and 11-18 are rejected and Claims 9 and 10 are objected to in the present application.

Applicant respectfully submits that with this response, the claims have been amended to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Also, Applicant has canceled three claims without prejudice. Applicant respectfully submits that none of the amendments to the existing claims constitute new matter.

The Examiner has rejected Claims 1-3, 5-8, 12-14 and 16-18 under 35 U.S.C. 102(b) as being anticipated by Jordan (USPN 4,135,393). Claim 1 as amended recites a hydraulic jack mounted on a frame between its ends for applying a force on a stressed cable. The Jordan '393 reference does not describe a hydraulic jack mounted on a frame between its ends for applying a force on a stressed cable. Therefore, the Jordan '393 reference does not anticipate amended Claim 1 of the present application. Amended Claim 1 is an allowable independent claim and Claims 2-3, 5-7, 12-14 and 16-18 are either directly or indirectly dependent on amended Claim 1, therefore, the dependent claims are patentably distinguishable over the Jordan '393 reference for the same reason.

Claim 8 as amended recites the step of applying a force utilizing a hydraulic jack to a stressed cable sufficient to

deflect the cable relative to a selected pair of spaced apart points. The Jordan '393 reference does not describe a step of applying a force utilizing a hydraulic jack to a stressed cable sufficient to deflect the cable relative to a selected pair of spaced apart points. Therefore, the Jordan '393 reference does not anticipate amended Claim 8 of the present application.

Amended Claim 8 is an allowable independent claim and Claim 10 is directly dependent on amended Claim 8, therefore, the dependent claim is patentably distinguishable over the Jordan '393 reference for the same reason. Applicant respectfully submits that the Examiner withdraw the 102 rejection to Claims 1-3, 5-8, 12-14 and 16-18.

The Examiner has rejected Claims 4, 11 and 15 under 35 U.S.C. 103(a) as being unpatentable over the Jordan '393 reference in view of Hensler (USPN 4,746,024). Claims 4, 11 and 15 are canceled without prejudice. Independent Claims 1 and 8 have been amended to include the content of canceled Claims 4, 11 and 15.

Applicant respectfully submits that the present invention is not obvious over the Jordan '393 reference in view of Hensler. The Jordan '393 reference relates to an apparatus for measuring the tension of wire used to support masts on sail boats. The Hensler '024 reference relates to an aerial boom with a tensiometer attached to a lifting cable to ensure that the load

on the lifting cable is not so heavy that the boom tips over during the lifting of an object. There is no teaching, suggestion, or incentive to combine these references because the Jordan '393 reference does not specifically state or imply having a problem with an aerial boom necessitating a tensiometer attached to a lifting cable to ensure that the load on the lifting cable is not so heavy that the boom tips over during the lifting of an object. The Hensler '024 reference does not specifically state or imply having a problem with needing to measure the tension of the wire used to support masts on a sail boat. Therefore, these two references do not describe or show any deficiencies that would be remedied by combining the two references. The tensiometer used in the Hensler '024 reference serves a different purpose than the tensiometer in the Jordan '393 reference. The tensiometer in the Hensler '024 reference is used to ensure that the load on the lifting cable is not so heavy as to cause the aerial boom to tip over during the lifting of an object wherein the tensiometer in the Jordan '393 reference is used to measure the tension on the wire used to support masts on a sail boat. Therefore, neither reference would benefit from the combination of the two references. Consequently, there is no teaching, suggestion, or incentive to combine the Jordan '393 reference with the Hensler '024 reference.

Applicant respectfully requests the Examiner to withdraw the 102 and 103 rejections and forward a Notice of Allowability to the undersigned.

If the Examiner has any questions or comments that would speed prosecution of this case, he is invited to call the undersigned at 219/485-6001.

Respectfully submitted,



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RJK/td8  
Encs:  
Replacement Claims  
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner of Patents and Trademarks, Washington, D.C. 20231, on: August 24, 2001.

Randall J. Knuth, Regis. No. 34,644

Name of Registered Representative



Signature

August 24, 2001

Date

REPLACEMENT CLAIMS

1. A device for measuring the tension in stressed cables,  
said device comprising:

a frame having a pair of ends adapted to engage a said  
stressed cable;

a hydraulic jack mounted on said frame between its ends for  
applying a force on the stressed cable; and

a measuring means on said frame, for measuring the  
deflection of the stressed cable.

8. A method of detecting the amount of tension in a  
stressed cable, said method including the following steps:

supporting the stressed cable at a selected pair of spaced  
apart points;

applying a force utilizing a hydraulic jack to the stressed  
cable sufficient to deflect the cable relative to said supported  
points; and

measuring the deflection of the stressed cable.

9. A method as defined in Claim 8 wherein the force that is  
applied to the stressed cable is a known force.

10. A method of detecting the amount of tension in a  
stressed cable, said method including the following step:

calculating the amount of stress in the stressed cable using the  
amount of deflection, by applying the following equation:

$$T = \frac{F}{2 \sin \theta} \quad \text{where} \quad \theta = \tan^{-1} \frac{\Delta}{L/2}$$

wherein the variable "L" refers to the distance between the  
spaced apart point, " $\Delta$ " refers to the deflection, and " $\theta$ " refers  
to the angle of deflection.

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## WHAT IS CLAIMED IS:

1. A device for measuring the tension in stressed cables, said device comprising:

a frame having a pair of ends adapted to engage a said stressed cable;

5 a <sup>hydraulic</sup> jack mounted on said frame between its ends for applying a force on the stressed cable; and

a measuring means on said frame, for measuring the deflection of the stressed cable.

2. A device as defined in Claim 1 further comprising a hook means, said hook connected to said jack and adapted for engagement with said stressed cable.

3. A device as defined in Claim 2 wherein the force of said jack is applied to the stressed cable through said hook means.

Cancel → 4. A device as defined in Claim 1 wherein the jack is a hydraulic jack.]

5. A device as defined in Claim 1 wherein the jack applies a pre-set force to the stressed cable.

6. A device as defined in Claim 1 wherein said measuring means includes a gauge mounted onto said frame.

7. A device as defined in Claim 1 wherein the frame is in the shape of a "V".

8. A method of detecting the amount of tension in a stressed cable, said method including the following steps:

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supporting the stressed cable at a selected pair of spaced apart points; utilizing a hydraulic jack

5 applying a force<sup>v</sup> to the stressed cable sufficient to deflect the cable relative to said supported points; and measuring the deflection of the stressed cable.

9. A method as defined in Claim [7]<sup>8</sup> wherein the force that is applied to the stressed cable is a known force.

10. A method <sup>of detecting the amount of tension in</sup> as defined in Claim 7 wherein the amount of a stressed cable, said method including the following step: calculating deflection is used to calculate the amount of stress in the

stressed cable, by applying the following equation:

utilizing the amount of deflection

$$T = \frac{F}{2\sin\theta} \text{ where } \theta = \tan^{-1} \frac{\Delta}{L/2}$$

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wherein the variable "L" refers to the distance between the spaced apart point, "Δ" refers to the deflection, and "θ" refers to the angle of deflection.

Cancel → [11. A device as defined in Claim 2 wherein the jack is a hydraulic jack.]

12. A device as defined in Claim 2 wherein the jack applies a pre-set force to the stressed cable.

13. A device as defined in Claim 2 wherein said measuring means includes a gauge mounted onto said frame.

14. A device as defined in Claim 2 wherein the frame is in the shape of a "V".



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cancel → [15: A device as defined in Claim 3 wherein the jack is a hydraulic jack.]

16. A device as defined in Claim 3 wherein the jack applies a pre-set force to the stressed cable.

17. A device as defined in Claim 3 wherein said measuring means includes a gauge mounted onto said frame.

18. A device as defined in Claim 3 wherein the frame is in the shape of a "V".